

M4A  
CQWW DX SSB  
October 2006

Propagation Predictions and Evaluation of last year's log

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## Introduction

These predictions have been prepared to assist operators in finding openings and making band choices. Obviously, they are only predictions and so the operator is free to ignore the comments here if they feel the band is not behaving as predicted.

The guide is written in 6x4-hourly blocks, with a final section discussing statistics from last year's log. In case you can't be bothered to read it all, the key points I guess are that we lost a lot of points last year by neglecting 20m, staying on 40m too long and so making lots of EU QSOs, and inappropriate band-changes due to the lack of a (manned) mult station.

## Propagation Summary

The sun is currently spotless, with the 10.7cm flux number of 75 not expected to change over the weekend. With the start of cycle 24 expected in April, this is likely to be the worst CQWW for propagation in recent years. The geomagnetic A-index has been at quiet levels recently (3-4 units) but the Earth is due to cross the path of solar wind associated with a recurring coronal hole visible last week on Saturday, which will affect this. SEC<sup>1</sup> currently assess the probabilities at high latitudes of geomagnetic disturbances on Saturday as follows:

*Active (Ap=15-29 units) – 45%;*

*Minor storm (Ap = 30-49 units) – 15%;*

*Major storm (Ap = 50-99 units) – 10%*

This will obviously affect our performance, especially on lower bands. As a result of this, in the propagation tables, 'K3:' indicates a forecast for a K index of 3, and 'K6:' for K-index of 6.

There is a warning out for visible aurora in Scandinavia and Alaska over this weekend. This means that it is quite possible that we will hear auroral propagation. If this happens, don't forget to turn the multiplier station's beam into the aurora and try to listen on the higher bands. You never know, 10m might just work!

## Period 1: 0000-0400 UTC

Place	80m	40m	20m	15m	10m
<b>East-coast USA (W1)</b>	OK	Possible but best before 0230.			
<b>West-coast USA (W6)</b>	Possible from about 0130, but may be unstable around 0300.	K3: Best to 0130, then OK. K6: Unlikely before 0100, then OK.	K3: Slight chance around 0230. K6: Slight chance 0130-0300.		
<b>Central USA (W7)</b>	Open. Best after 0030.	Open. Best after 0100.	K6: Slight chance 0130-0200.		
<b>Caribbean (PJ)</b>	Open.	Open.	K3: Unlikely. K6: Unlikely, dead by 0230.		
<b>South America (LU)</b>	Open.	Open.	Unlikely.		
<b>Equatorial Africa (5Z)</b>	Open to 0300.	Open to 0330.	Unlikely to 0200, then dead.		
<b>Saharan Africa (CN)</b>	Open.	Open.	Slight chance 0130-0300.		
<b>Middle-East (A4)</b>	Open. Best before 0300.	Open. Dies quickly after 0430. Best before 0300.	Slight chance, except dead 0100-0200.		
<b>Eastern Europe (UR)</b>	Open.	Open.			
<b>India (VU)</b>	Dead by 0130.	Dead by 0200.			
<b>Asiatic Russia (UA0)</b>	Open. Weak 0200-0230.	Open. Less likely after 0200.			
<b>Japan (JA)</b>					
<b>Australia (VK2)</b>					
<b>Pacific Islands (KH6)</b>	Opens around 0330.	Opens around 0400.			

**Bands and rates last year:**

Day	Time	Rate	Band Breakdown	Observations
Sat	0000-0100	33q/h	40m: 24qs; 80m: 9qs	
Sat	0100-0200	22q/h	40m: 5qs; 80m: 18qs	
Sat	0200-0300	55q/h	80m: 55qs	
Sat	0300-0400	14q/h	40m: 5qs; 80m: 9qs	Probably wasn't worth changing to 40m here as we lost the QRG.
Sun	0000-0100	7q/h	40m: 7qs	Would it have been better to check 80m?
Sun	0100-0200	35q/h	40m: 35qs	
Sun	0200-0300	10q/h	40m: 4qs; 80m: 6qs	We QSYd to 80 for the last 10mins and made 6 QSOs immediately. Should we have changed sooner?
Sun	0300-0400	21q/h	40m: 2s; 80m 19qs	

**Bands and UTC times where we had rates of 3Qs/minute or more last year:**

40m: 0114

80m: 0237-0311

**Continent breakdown last year:**

Sat 0000-0100: Mainly EU and NA. Few from AF, AS, SA

Sat 0100-0200: Split EU and NA.

Sat 0200-0300: Almost all NA. Few EU.

Sat 0300-0400: Mainly EU. Few NA and one AS.

Sun 0000-0100: Mainly NA. Few EU.

Sun 0100-0200: All NA.

Sun 0200-0300: Almost all EU. Few SA.

Sun 0300-0400: Mainly EU. Few NA.

## Period 2: 0400-0800 UTC

Sunrise is during this period, at about 06:20 UTC. Check for grey-line propagation beaming along the grey-line (20°-220°) for about 20 minutes either side of sunrise, particularly on 20m. Note that 20° is particularly important as, aurora allowing, it should allow propagation to the Pacific multipliers over the pole.

Place	80m	40m	20m	15m	10m
<b>East-coast USA (W1)</b>	Open to 0600, then weakens. K3: Maybe possible throughout period K6: Path dead by 0700.	Possible to 0730. Best chance: 0600-0700.			
<b>West-coast USA (W6)</b>	Open.	Best to 0500. K3: Maybe throughout period. K6: Dies around 0600.			
<b>Central USA (W7)</b>	Open. Sigs peak 0630, drop off from 0730.	Unlikely but could be open. Most likely 0730-0800.			
<b>Caribbean (PJ)</b>	Open. K3: Starts to drop 0700. K6: Starts to drop 0800.	Open. K3: Starts to drop 0700. K6: OK	Slight chance from 0730.		
<b>South America (LU)</b>	Open to 0700. Peaks 0630.	Open to 0730.	Unlikely.		
<b>Equatorial Africa (5Z)</b>			Slight chance 0600-0730.	Slight chance from 0730.	
<b>Saharan Africa (CN)</b>	Open. Best before 0630.	Open. Best before 0630.	Small chance from 0700.		
<b>Middle-East (A4)</b>		Dead by 0500.	Slight chance but dead 0530.	Slight chance from 0630.	
<b>Eastern Europe (UR)</b>	Open. Weaker from 0630.	Open. Less likely 0600-0630.	Starting to open 0630.	Slight chance from 0730.	
<b>India (VU)</b>			Weak but open from 0630.	Slight chance from 0730.	
<b>Asiatic Russia (UA0)</b>	Open but weak, except stronger 0600.	Open. Strongest 0630.	Unlikely from 0630.		
<b>Japan (JA)</b>			Maybe poss from 0600, esp after 0700.	Slight chance from 0700.	
<b>Australia (VK2)</b>			Small but increasing chance from 0600.		
<b>Pacific Islands (KH6)</b>	Open. Best 0630-0700.	Open.	Slight chance from 0730.		

**Bands and rates last year:**

Day	Time	Rate	Band breakdown	Observations
Sat	0400-0500	1qs/h	80m: 1 QSO)	What happened here? Op asleep?!
Sat	0500-0600	5qs/h	40m: 5 QSOs	Looks like the op gave up here too. All 5 were in the first 21 mins of the hour. Were we checking 20m?
Sat	0600-0700	19qs/h	40m: 1 QSO; 20m: 18 QSOs	
Sat	0700-0800	78qs/h	20m: 78 QSOs	
Sun	0400-0500	52qs/h	80m: 52 QSOs	Shows how much we lost the previous night.
Sun	0500-0600	34qs/h	80m: 34 QSOs	Had a slowish run going on 3.683MHz. But would we have got more points on another band?
Sun	0600-0700	53qs/h	80m: 44 QSOs; 40m: 9 QSOs	Seem to have swapped to 40 on the hour and stayed there for 30 mins, then come back to 80 for the last 20 mins and made a lot more QSOs. Needed a mult station here to help make the band decision.
Sun	0700-0800	25qs/h	15m: 12 QSOs; 40m: 2 QSOs; 80m: 11 QSOs	Looks like we left moving to 20m too late, and so missed getting a frequency and had to go to 15m instead.

**Bands and UTC times where we had rates of 3Qs/minute or more last year:**

80m: 0422-0438

80m: 0641-0701

20m: 0720-0746

15m: 0739

**Continent breakdown last year:**

Sat 0400-0500: All EU

Sat 0500-0600: All NA

Sat 0600-0700: Mainly EU. Four AS and one NA.

Sat 0700-0800: All EU, except 8 AS.

Sun 0400-0500: Mainly NA, one EU and one SA.

Sun 0500-0600: Mainly NA. One SA and one AF.

Sun 0600-0700: Mainly EU with some NA. Two SA and one AF.

Sun 0700-0800: 11xEU, 8xNA, 5xAS, 1xSA and 1xOC.

### Period 3: 0800-1200 UTC

Place	80m	40m	20m	15m	10m
<b>East-coast USA (W1)</b>	K3: Maybe possible to 0900. K6: Dead.	K3: Unlikely K6: Dead	K3: May start opening 1130 K6: Dead		
<b>West-coast USA (W6)</b>		Very small chance to 0930.			
<b>Central USA (W7)</b>	Unlikely after 0830.	Unlikely after 1030.			
<b>Caribbean (PJ)</b>	K3: Dead after 0800. K6: Dead after 0830.	K3: Unlikely after 0900. K6: As above; may peak 1000.	Unlikely, then open from 1100.	Slight chance from 1130.	
<b>South America (LU)</b>			Open, becoming less likely.	May start to open 1100.	Slight chance from 1100.
<b>Equatorial Africa (5Z)</b>			Weak but open.	Weak but open. Best after 1030.	Slight chance from 0900.
<b>Saharan Africa (CN)</b>	Dies 0800.	Open.	Open.	Open. Best after 1030.	Slight chance from 0900.
<b>Middle-East (A4)</b>			Open but weak.	Open. Best after 0900.	Slight chance, esp. after 1030.
<b>Eastern Europe (UR)</b>	Weak from 0830.	Open	Open	Slight chance . More likely from 1000.	Slight chance from 1100.
<b>India (VU)</b>			Weak but open.	Open. Best after 1000.	Slight chance from 1100.
<b>Asiatic Russia (UA0)</b>	Weak but open	Open.	Dead after 1030.		
<b>Japan (JA)</b>		Small opening at 0900, then from 1130.	Open. Less likely after 0930.	Dead by 1000.	
<b>Australia (VK2)</b>			Open from 0930.	Should be possible from 0830.	Slight chance from 0900.
<b>Pacific Islands (KH6)</b>	Dies around 0900.	Very weak from 1000.	Slight chance.		

**Bands and rates last year:**

Day	Time	Rate	Band breakdown	Observations
Sat	0800-0900	41q/h	10m: 5 QSOs; 15m: 10 QSOs; 20m: 17 QSOs; 40m: 5 QSOs.	We were on 20m to 0816, then 15m to 0837, 10m to 0845 and then went back to a slow rate on 40m. This might suggest we couldn't go back to 20m as it was crowded, so it might have been better not to move to 15 and 10 at that stage (ie. use the mult station).
Sat	0900-1000	59q/h	15m: 17 QSOs; 20m: 27 QSOs; 40m: 15 QSOs	Looks like we weren't happy with the band choice here as we went 40m to 15m to 20m to 15m to 20m in one hour! The second move to 15m was to get a VK, but that could have been done on a mult station.
Sat	1000-1100	46q/h	10m: 16 QSOs; 15m: 25 QSOs; 20m: 5 QSOs;	Nice jump to 10m for an opening in the first half of the hour.
Sat	1100-1200	77q/h	15m: 5 QSOs; 20m: 30 QSOs; 40m: 47 QSOs.	Reasonable rate on 40m but is it worth working Europeans at this sort of time, when more points might be available on 20m?
Sun	0800-0900	53q/h	10m: 10 QSOs; 15m: 43 QSOs.	
Sun	0900-1000	40q/h	10m: 16 QSOs; 15m: 8 QSOs; 20m: 16 QSOs.	Lots of band-swapping, as in the same hour yesterday.
Sun	1000-1100	56q/h	15m: 56 QSOs.	
Sun	1100-1200	57q/h	15m: 57 QSOs.	

**Bands and UTC times where we had rates of 3Qs/minute or more last year:**

15m: 0805-0829  
40m: 0901-0903  
20m: 0925-0936  
15m: 0945  
15m: 0957-1026  
10m: 1014  
15m: 1033  
40m: 1117-1130  
15m: 1146-1151  
20m: 1154

**Continent breakdown last year:**

Sat 0800-0900: All EU (33) except a 5xAS, 3xAF and 1xOC.  
Sat 0900-1000: All EU (55) except 2xAS, 1xAF and 1xOC.  
Sat 1000-1100: All EU (42) except 4xAS, 1xAF.  
Sat 1100-1200: Mainly EU (49) but 25xNA and 2xAS, 2xSA.

Sun 0800-0900: Rough split (24/27) between AS and EU. Also 2xAF, 2xOC.  
Sun 0900-1000: Mainly EU (20) but 13xAS, 1xSA, 5xAF and 2xOC.  
Sun 1000-1100: Mainly EU (39) but 14xAS, 1xSA, 3xOC.  
Sun 1100-1200: Mainly EU (42) but 6xNA, 4xAS, 2xAF.



## Period 4: 1200-1600 UTC

Place	80m	40m	20m	15m	10m
<b>East-coast USA (W1)</b>			K3: Possible from start, best after 1330. K6: Possible after 1430.	K3: Maybe possible from 1330. K6: Maybe possible from 1500.	
<b>West-coast USA (W6)</b>			K3: Long-path maybe possible 1500-1600. K6: Very unlikely but maybe a short LP opening around 1600.	K3: Long-path maybe possible around 1600.	
<b>Central USA (W7)</b>				K6: Small chance to 1500-1600	
<b>Caribbean (PJ)</b>			Open, but sigs strongest before 1300.	Possible.	Slight chance 1300-1600. K6: Closes 1530.
<b>South America (LU)</b>				Weak but should be workable.	Small chance.
<b>Equatorial Africa (5Z)</b>			Open. Weak at first, best after 1500.	Weak but open. Less likely after 1430.	Slight chance to 1500.
<b>Saharan Africa (CN)</b>	Maybe possible around 1600.	Open.	Open.	Open. Less likely from 1530.	Slight chance.
<b>Middle-East (A4)</b>			Open, getting better.	Open. Less likely after 1400.	Dead by 1430.
<b>Eastern Europe (UR)</b>	Open from about 1430.	Open.	Open.	Open to 1300, then unlikely. Dead by 1530.	Dead by 1230.
<b>India (VU)</b>	Open from 1530.	Open from 1500.	Open. Less likely from 1430.	Dead by 1400.	
<b>Asiatic Russia (UA0)</b>	Open but weak. Better after 1530.	Unlikely, but could be open, esp after 1530.			
<b>Japan (JA)</b>	Open from 1400.	Open except at 1400.	Unlikely.		
<b>Australia (VK)</b>	Starts to open 1530.	Open from 1330.	Open.	Open. Less likely after 1330. Dead by 1530.	Dead by 1300
<b>Pacific Islands (KH7)</b>		Open but very weak.	Unlikely.		

**Bands and rates last year:**

Day	Time	Rate	Band breakdown	Observations
Sat	1200-1300	15q/h	15m: 15 QSOs.	Why so slow?
Sat	1300-1400	18q/h	15m: 18 QSOs.	Would 20m have been better?
Sat	1400-1500	19q/h	15m: 19 QSOs.	
Sat	1500-1600	23q/h	15m: 23 QSOs.	
Sun	1200-1300	40q/h	15m: 40 QSOs.	
Sun	1300-1400	45q/h	10m: 6 QSOs; 15m: 9 QSOs; 20m: 30 QSOs.	
Sun	1400-1500	101q/h	15m: 25 QSOs; 20m: 76 QSOs.	
Sun	1500-1600	51q/h	10m: 2 QSOs; 15m: 43 QSOs; 20m: 6 QSOs.	We had a nice rate on 15m, which was interrupted for a mult on 10m, which then meant we were stuck there for 10 mins.

**Bands and UTC times where we had rates of 3Qs/minute or more last year:**

10m: 1305

20m: 1349-1431

15m: 1453-1517

**Continent breakdown last year:**

Sat 1200-1300: Mainly EU (11) but 4xNA.

Sat 1300-1400: Rough split (10/7) EU/NA

Sat 1400-1500: Mainly NA (15) but 4xEU.

Sat 1500-1600: Mainly NA (14) but 2xEU, 4xSA, 4xAF.

Sun 1200-1300: Rough split (20/16) NA/EU, also 2xAS, 1xSA, 1xAF.

Sun 1300-1400: Mainly EU (32) but 6xNA, 6xAS, 1xOC.

Sun 1400-1500: Mainly EU (65) but 24xNA, 10xAS, 2xOC.

Sun 1500-1600: Mainly NA (40) but 4xSA, 3xAS, 3xEU, 1xAF.

## Period 5: 1600-2000 UTC

Sunset is during this period, at about 1640 UTC. Check for grey-line propagation beaming along the grey-line (160°-340°) for about 20 minutes either side of sunset. It is possible that 340° could bring us KL7 or W6 over the pole.

Place	80m	40m	20m	15m	10m
<b>East-coast USA (W1)</b>		Starts to open 1900	K3: OK, then starts to die 1900 K6: OK, then starts to die 1830	Dies by 1800	
<b>West-coast USA (W6)</b>			Open, but best before 1730.	SP: Best around 1630. Dies 1700. LP: Best around 1600, then dies.	
<b>Central USA (W7)</b>			K3: Open. Best 1600-1730. Dead by 1930. K6: Unlikely	K3: Slight chance at 1700. K6: Dead.	
<b>Caribbean (PJ)</b>		K6: Starts to open 1900.	Possible, but becoming less likely.	K3: Dead by 1830. K6: Dead by 1930.	
<b>South America (LU)</b>			May start to open 2000.	Dead by 1900.	Dead by 1730.
<b>Equatorial Africa (5Z)</b>	Weak but open from 1700 best later.	Open from 1700.	Open but less likely from 1730.	Dead by 1730.	
<b>Saharan Africa (CN)</b>	Open. Best from 1730.	Open. Best from 1730.	Open, but less likely after 1900.	Dead by 1730.	
<b>Middle-East (A4)</b>	Open from 1630.	Open.	Unlikely, esp. after 1830.		
<b>Eastern Europe (UR)</b>	Open. Getting stronger.	Open.	Probably dead by 1800.		
<b>India (VU)</b>	Open. Best 1700-1800.	Open.	Unlikely.		
<b>Asiatic Russia (UA0)</b>	Open.	Open.			
<b>Japan (JA)</b>	Open.	Open.	Dead by 1900.		
<b>Australia (VK2)</b>	Open to 1900.	Open. Best after 1630.	Unlikely after 1700.		
<b>Pacific Islands (KH7)</b>		Dies around 1630.	Unlikely, but better chance 1700-1730. Dead 1800.		

**Bands and rates last year:**

Day	Time	Rate	Band breakdown	Observations
Sat	1600-1700	10q/h	15m: 10 QSOs.	Slow again?
Sat	1700-1800	18q/h	15m: 15 QSOs; 20m: 3 QSOs.	
Sat	1800-1900	59q/h	20m: 51 QSOs; 40m: 8 QSOs.	
Sat	1900-2000	104q/h	20m: 95 QSOs; 40m: 9 QSOs.	
Sun	1600-1700	93q/h	10m: 1 QSO; 15m: 91 QSOs; 20m: 1 QSO.	That 10m mult cost us 10 mins doing nothing when we could have been running on 15.
Sun	1700-1800	85q/h	20m: 85 QSOs.	
Sun	1800-1900	22q/h	20m: 22 QSOs.	
Sun	1900-2000	22q/h	20m: 22 QSOs.	If the band is dying was it an appropriate place to stay?

**Bands and UTC times where we had rates of 3Qs/minute or more last year:**

15m: 1623-1653

20m: 1712-1735

20m: 1824

20m: 1907-1929

**Continent breakdown last year:**

Sat 1600-1700: Mainly NA (6) but 2xSA, 2xAF.

Sat 1700-1800: Mainly NA (16) but 2xEU.

Sat 1800-1900: Almost all NA (49) but 7xEU, 3xAS.

Sat 1900-2000: Almost all NA (97) but 4xEU, 3xAS, 2xAF.

Sun 1600-1700: Almost all NA (90) but 2xAF, 1xSA.

Sun 1700-1800: Almost all NA (78) but 3xEU, 2xAS, 2xOC.

Sun 1800-1900: Almost all NA (21) but 1xSA.

Sun 1900-2000: Almost all NA (20) but 2xEU.

## Period 6: 2000-0000 UTC

Place	80m	40m	20m	15m	10m
<b>East-coast USA (W1)</b>	Starts to open 2030.	Open. Best 2200-0100.			
<b>West-coast USA (W6)</b>			Maybe open to 2130, less likely with higher K.		
<b>Central USA (W7)</b>	Open from about 2330.	K3: Becoming open but sigs dip briefly at 2100. K6: Unlikely, best 2100.			
<b>Caribbean (PJ)</b>	Open from about 2130.	Open. Best after 2230.	Unlikely.		
<b>South America (LU)</b>	Open from about 2230.	Open from about 2200.	Unlikely.		
<b>Equatorial Africa (5Z)</b>	Open.	Open.	Unlikely. Closes 2330.		
<b>Saharan Africa (CN)</b>	Open.	Open.	Unlikely.		
<b>Middle-East (A4)</b>	Open.	Open.	Unlikely.		
<b>Eastern Europe (UR)</b>	Open.	Open.			
<b>India (VU)</b>	Open.	Open.	Dies 2000.		
<b>Asiatic Russia (UA0)</b>	Open.	Open.			
<b>Japan (JA)</b>	Dead by 2230.	Open. Best before 2230.			
<b>Australia (VK2)</b>	Dies at 2000.	Dies at 2030.	Dies at 2100.		
<b>Pacific Islands (KH7)</b>					

**Bands and rates last year:**

Day	Time	Rate	Band breakdown	Observations
Sat	2000-2100	28q/h	20m: 17 QSOs; 40m: 11 QSOs.	
Sat	2100-2200	38q/h	40m: 28 QSOs; 80m: 10 QSOs.	
Sat	2200-2300	37q/h	40m: 17 QSOs; 80m: 20 QSOs.	
Sat	2300-0000	21q/h	40m: 1 QSO; 80m: 20 QSOs.	
Sun	2000-2100	34q/h	20m: 34 QSOs.	
Sun	2100-2200	13q/h	40m: 13 QSOs.	
Sun	2200-2300	58q/h	40m: 1 QSO; 80m: 57 QSOs.	Looks like we changed band too late. There is a 26 min gap in the log while on 40m, just before we got a good run on 80m.
Sun	2300-0000	73q/h	80m: 73 QSOs.	

**Bands and UTC times where we had rates of 3Qs/minute or more last year:**

20m: 2017

40m: 2129

80m: 2243-2253

80m: 2312-2347

**Continent breakdown last year:**

Sat 2000-2100: Mainly NA (15) but 9xEU, 3xAS, 1xSA

Sat 2100-2200: Mainly EU (31) but 5xAS, 1xSA, 1xAF

Sat 2200-2300: Mainly EU (28) but 6xNA, 3xAS.

Sat 2300-0000: Mainly EU (18) but 2xNA, 2xAS.

Sun 2000-2100: Mainly NA (34) but 1xEU.

Sun 2100-2200: All EU (13) but 1xAS.

Sun 2200-2300: Almost all EU (60) but 1xAS, 1xAF.

Sun 2300-0000: Almost all EU (x) but 1xNA.

## Band choices last year

Band	QSO	%	CW	%	SSB	%	RTTY	%	Time	%	QSO/min.
160	0	0	0	0	0	0	0	0	0	0	0
80	446	23	0	0	446	23	0	0	476	21	0.937
40	261	13	0	0	261	13	0	0	417	19	0.626
20	637	33	0	0	637	33	0	0	561	25	1.140
15	546	28	0	0	546	28	0	0	712	32	0.767
10	56	3	0	0	56	3	0	0	76	3	0.737
Total	1946	0	0	0	1946	100	0	0	2242	0	0.676

- We spent about the right amount of time on 80m
- We wasted time on 40m: 19% of the time for only 13% of the QSOs! It was our slowest per minute QSO rate.
- We should have been on 20m longer: it gave us 33% of our QSOs, despite us only being there for 25% of the contest.
- We wasted a little time on 15m: 32% of the time for only 28% of the QSOs.
- Were the mults we got on 10m worth spending 3% of the time available on?
- Equivalent of about 11 hours rest (ie. station not doing anything > 20mins!)

## Last year's score

Summary						
BAND	QSO	DUP	DXC	CQ	POINTS	AVG
160	0	0	0	0	0	0.00
80	442	4	68	15	790	1.79
40	259	2	70	13	465	1.80
20	636	1	65	24	1410	2.22
15	539	7	91	34	1223	2.27
10	56	0	26	11	100	1.79
TOTAL	1932	14	320	97	3988	2.06
<b>FINAL SCORE: 1 662 996</b>						